

What is claimed is:

1. A communication apparatus employing a plurality of communication devices to construct a wireless network to be a control station transmitting management information in the wireless network, the communication apparatus comprising a communication means transmitting information among the plurality of communication devices,

a determining means determining as to whether, when the control station disappears from the wireless network, in order that any one of other communication devices is newly operated as a control station, the other communication devices have a control function as a control station candidate or not,

a set means setting priority order for each of control station candidates when there exist a plurality of communication devices to be the control station candidates, and

a notification means notifying the wireless network of priority order information of the control station candidates.

2. The communication apparatus according to claim 1, wherein the notification means specifies, as the priority order information, stand-by times corresponding to the times until the respective control station candidates start to reconstruct the wireless network.

3. The communication apparatus according to claim 1, wherein the set means sets the priority order in the order of the number of other communication devices capable of being connected with the control station candidate for the respective control station candidates.

4. The communication apparatus according to claim 1, wherein the set means sets the priority order in the order of communication quality between the control station candidate and other communication devices for the respective control station candidates.

5. A communication method of a control station transmitting management information in a wireless network, the communication method employing a plurality of communication devices to construct the wireless network, the communication method comprising the steps of

determining step determining as to whether, when the control station disappears from the wireless network, in order that any one of other communication devices is newly operated as a control station, the other communication devices have a control function as a control station candidate or not,

setting step setting priority order for each of control station candidates when there exist a plurality of communication devices to be the control station candidates, and

notifying step notifying the wireless network of priority order information of the control station candidates.

6. The communication method according to claim 5, wherein the notifying step specifies, as the priority order information, stand-by times corresponding to the times until the respective control station candidates start to reconstruct the wireless network.

7. The communication method according to claim 5, wherein the setting step sets the priority order in the order of the number of other communication devices capable of being connected with the control station candidate for the respective control station candidates.

8. The communication method according to claim 5, wherein the setting step sets the priority order in the order of communication quality between the control station candidate and other communication devices for the respective control station candidates.

9. A communication apparatus in a wireless network composed of a control station and a plurality of communication devices, the communication apparatus comprising a communication means transmitting information among the

other communication devices,

a means receiving priority order information representing stand-by times different in each communication device from the control station and setting communication devices as control station candidates in a memory, and

a means performing communication control as a control station in the wireless network when the stand-by time elapses.

10. A communication apparatus comprising

a communication means connected with a plurality of communication terminals via a network to transmit information among the communication terminals and

a management means employing the communication means to transmit management information to the respective communication terminals to manage information transmission among the respective communication terminals and specifying, after determining priority order, two or more communication terminals in the plural communication terminals connected via the network as slave control stations managing the information transmission among the respective communication terminals when transmission of the management information becomes impossible.

11. The communication apparatus according to claim 10, wherein the management means sets the priority order of the respective communication terminals of the time of specifying two

or more communication terminals in the plural communication terminals connected via the network as slave control stations based on information transmission condition of the respective communication terminals.

12. The communication apparatus according to claim 11, wherein the information transmission condition of the communication terminals determined in the management means is a condition determined from the number of communication terminals capable of direct communication in the network or communication quality with the respective communication terminals.

13. A communication apparatus comprising a communication means transmitting information among a plurality of communication terminals via a network and a management means employing the communication means to transmit management information to the respective communication terminals to manage information transmission among the respective communication terminals when becoming a master control station on the network, controlling the information transmission based on the management information from a communication terminal specified as a master control station when becoming a communicating station and a slave control station on the network, and managing the information transmission among the respective communication terminals after

waiting only a time based on preset priority order when it is detected that the communication terminal specified as the master control station on the network is incapable of communication when being a slave control station on the network.

14. A communication control method of a network composed of a plurality of communication terminals, the communication control method comprising the steps of

managing information transmission among the plurality of communication terminals while setting one of communication terminals as a master control station,

setting two or more communication terminals in the network other than the master control station as slave control stations after priority order according to which to manage the respective terminals is determined, and

trying to manage the information transmission among the respective communication terminals from a slave control station having higher priority order when the master control station becomes incapable of communication so that the slave control station manage the information transmission when the information transmission can be managed.